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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

REPORT NO.

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COUNTRY Germany (Russian Zone)

DATE DISTR. 20 October 1949

SUBJECT Uranium Ore Mining in the
Freiberg District

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I - August 1948

1. Uranium Deposits

a. The old FREIBERG (N 51/K 97) ore districts were included in the uranium and thorium prospecting schedule at the end of 1947. Actual mining operations were started in early 1948. The "Freiberg Ore District" was divided into four sub-districts.

b. The "Brandner Revier District", south of FREIBERG, was the main uranium area. It comprised the mines around the small town of BRAND (N 51/K 34) and especially the "Himmelsfuerst" Mine, near ERBISDORF. The lodes have a brown spar formation, containing mainly brown spar and manganese spar with the quartz. Ore deposits include galena (rich in silver), zincblende, iron pyrites, tetrahedrites, and (rarely) Cu, As, Ni, and Co. Uranium deposits are only sporadic.

c. Uranium deposits, particularly at intersections with old lodes, are found in the "Northern District", which comprises the mines in the valley east of FREIBERG ("Himmelfahrt" Mine), with its younger ore formations.

d. Uranium ore previously had been found only in small quantities in the FREIBERG District. Of the total of 120 tons of uranium ore found in Saxony from 1370 to 1907, only 8 percent came from the FREIBERG District, 66 percent from the SCHNEEBERG District, 10 percent from JOHANN GEORGENSTADT and the remaining 16 percent from various small mines.

e. The bulk of the FREIBERG uranium ore came from the "Himmelsfuerst" Mine, near BRAND. Uranium pitch ore was mainly found as "Pittin" ore, usually in lodes of brown spar formation. Secondary findings, mainly in silver mines, were made on barytic galena formations, the only uranium containing formation in the "Northern District"; only this type of lode, apparently, contained a small amount of uranium.

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It also occurred in weak strands and rapidly thinning fragments near HIMMELGRUBE and in the "Beschert-Clueck" and "Herzog-August" Mines, north of BRAND. Ore produced in the "Himmelsfuerst" Mine was earthy and frequently mixed with common-lode ores; it contained only 30 percent of U₃O₈.

f. A substantial amount (492 kg) was once found in the "Kalb Stehenden" Mine. The uranium pitch ore usually occurred at points of central ore deposits, where the uranium pitch ore was compact and kidney-shaped and contained up to 76 percent of U₃O₈. It came in rather large accumulations, mingled with brown spar.

g. The two "Komet" lodes, the "Komet Stehende" and the "Komet Flache" have always been comparatively rich in uranium pitch ore, although the last contained mainly inferior and earthy ore composites of 25 to 30 percent U₃O₈. Some deposits found in these lodes were more solid and much richer, but these were only small (lens-shaped) pockets.

h. The lodes of the pyritic galena formation and of the valuable silver ore formation contained no remarkable uranium deposits, and the output of the "Himmelfahrt" Mine was much smaller than expected.

i. Geheimrat SCHIFFER thoroughly investigated the whole of Saxony searching for radium from 1908 to 1910, and found uranium pitch ore in the "Neuhoffnung-Flachen" lode. It occurred in small, kidney-shaped pockets, interspersed with pyrargyrates, vitreous ores, galena and pyrites. Most of the workings of the "Himmelsfuerst" Mine which formerly contained uranium were considered to be exhausted. No uranium ore deposits were discovered in the "Komet" or "Benjamin Stehenden" lodes. On the contrary, the radioactivity of these lodes was little higher than that of lodes in which uranium was not known to exist. The degree of radioactivity was generally below the average of 5 "Psche" units registered in the spring water near the "Himmelsfuerst". SCHIFFER concluded from this that the source of the radioactivity of all these spring waters must be a dead quartz zone intersecting the rock in this area.

j. The FREIBERG District as a whole yielded only minimal uranium findings, and never had uranium deposits occurring alternately with other ores, as in JOACHIMSTHAL and to some extent in Schneeberg and JOHANN GEORGENSTADT. A natural explanation of the evolutionary geological process would be that sporadically rising uranium solutions settled to a very limited extent in certain small lode accumulations. Annexes No. 1, 2, and 3 show the mines and lodes of the three most important deposits, "Himmelfahrt Fundgrube" near FREIBERG, "Himmelsfuerst Fundgrube" near BRAND, and "Jorgenstern Erbstollen" near MULDENHUETTEN, respectively.

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2. Soviet Mining Activities

a. Mining has been confined to the most promising locations in the FREIBERG District, the "Himmelsfuerst" Mine, near BRAND, and the "Himmelfahrt" Mine, northeast and east of FREIBERG. At the "Himmelfahrt", the lodes of the former "Orgenstern-Erbstollen" (in the direction of HILBERSDORF) were first examined. The old, partly collapsed "Werner" gallery was cleared and drained, a very long and expensive operation. Maintenance costs are comparatively high even now, since the rock around this gallery, being near the surface, is rubble.

b. When the old workings of the "Friedrich Spat" lode had been reached and made accessible, it was systematically explored in depth, since small amounts of uranium pitch ore had occasionally been discovered. Adjacent lodes of this mine were also included in a large-scale prospecting operation. Approximately 150 men were employed in this area in August 1948.

c. The old "Orgenstern" Mine, now the "Luthaus", on the highway to HILBERSDORF, was reconditioned, but uranium pitch ore was scarce, and the expected output was not realized. Its accessible lodes, and to a somewhat greater degree the "Friedrich Spat" lode, had shown weak traces of radioactivity in careful radiometer examinations.

d. The main problem, that of labor, was easily overcome by the practice of labor commandeering (as successfully applied in the Upper Erzgebirge), and further operations were undertaken in April 1948. The entire town area, including all workings of the "Abraham", "David", "Reiche-Zeche", "Turmhof", and "Elisabeth" Mines were included in the schedule. Three to four hundred additional workmen were employed underground, and all collapsed upper passages above the "Rothschoenberg" gallery, 750 to 820 feet underground, were cleared and drained. Drainage of the deeper passages was started simultaneously. These operations were completed in June 1948, and the workings of the "Himmelfahrt-Fundgrube" were opened to their deepest level, 2,600 feet underground. The activity tests of all lodes and at all depths showed no better results than at the "Orgenstern-Erbstollen" - more or less weak radioactivity alternating at various lodes. No remarkable increase in radioactivity indicating the existence of larger uranium pitch ore deposits was recorded anywhere.

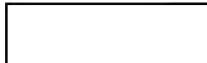
e. The work force was increased by June to about 350 underground workers, mainly working on the "Seligrost-Stehender", "Unverhofft-Flacher", "Neuglueck-Morgengang", and "Christian-Stehender" lodes. All these lodes commenced near the two principal mines, the "Reiche-Zeche" and "David-Schacht".

f. The work force has since been still further reinforced. More than five hundred men were employed in this mine by 1 June 1948.

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g. In addition to these workings operated by the "ismuth Corporation, the State of Saxony had previously commenced exploratory workings for lead and zinc ore at the "Himmelfahrt" Mine, above the "Rothschoenberg" gallery, and had also resumed lead mining at the "Falsbruecke" ("Beihilfe") Mine after a short layoff. It was unavoidable that the resulting close proximity of German and Russian operations would lead to differences, with the nationalized Saxon enterprise coming off second best. It was transferred to the "ismuth Corporation with its entire labor force by 1 August 1948. The combined labor force of the "Himmelfahrt" Mine and of the formerly nationalized enterprise (the "Beihilfe" Mine was temporarily left to the Saxon management) then amounted to about 1,700 men, with 1,250 underground and 150 working on the surface.

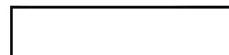
h. Prospecting activities were later considerably extended in the southern lodes (the "Turmhof" field), where the "Gotthold-Stehende" lode was of particular interest. The radiometer registered a better activity at a depth of 1,655 feet in this lode than elsewhere. The same applied to the "Seligrost-Stehende" lode, at a depth of about 1,600 feet. Excavation was commenced in both lodes. However, a very frequent change of radioactivity was observed at short distances, and no uranium ore was found.

i. The "Frankenschacht" and "Glueckaufschacht" Mines of the "Himmelsfuerst" Mine, below BRAND, resumed operation in February. The first had been kept open, and was usable for mine cars to the depth of the "Moritz" level.

j. The district power plant has supplied the entire area of the extensive BRAND District mining network since 1914, when the FREIBERG mining operations were suspended. The feed water needed for operation of the turbine installations near ZUG was pumped from an underground reservoir, which filled from the heavy influx of mine water and extended above the mining level of the BRAND and MITTELGRUB District. This reservoir had a sufficient volume to provide water during the dry season. After the mines had been opened, the reservoir was drained and the subsoil water was first lowered below the level of the "Rothschoenberg" gallery (600 feet). The drainage of still lower depths of the "Himmelsfuerst" Mine has been decided on, if proven necessary. The progressive descent of prospecting activity below the "Rothschoenberg" level may also be expected soon, as the uranium pitch ore was formerly found in deeper strata, and results so far obtained have hardly been of importance. The old "Sigismundschacht" Mine, in STRIEGISTAL, was also cleared and drained so that mine cars were usable to the depth of the "Moritz" level.

k. About three thousand men were employed at the BRAND Object at the end of August. The total German work force employed in the new FREIBERG mining activities numbered at least 5,500, including those assigned to the greatly increased administrative organization of the "ismuth Corporation and those employed by the mining school operated by the "ismuth Corporation, which had fifty personnel and about four hundred students in August, not including the Russian management.

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II - End of July 19483. Ownership, Personnel and Workforce

a. The "Himmelfahrt-Fundgrube" Mine (see annexes 1 and 4), east of FREIBERG, was transferred to the Fismuth Corporation on 8 July 1948, and was designated "Object XV".

b. Personnel:

- (1) Soviet management: Lt. Col. ETKIN
- (2) German management: Director SCHMIDT
- (3) Technical management: Graduate Engineer HULLA

c. Work force on 8 July 1948:

- (1) "David Schacht" Mine: 804 men
- (2) "Reiche Zeche" Mine (see Annex 4): 376 men; scheduled to be increased to 4,000.

4. Output

Lead and pyrite production was suspended after transfer of the mine to the Fismuth Corporation. The shafts had to be re-opened and cleared for the production of pitchblende. According to rough estimates, the output was 20,2 tons in 24 hours.

III - 15 August 19485. Chief Soviet Representatives in FREIBERG

Maj. STOREFF (geologist)
Lt. Col. ETKIN (mining engineer, formerly in AUE.)

6. Mines

- a. "Reiche Zeche" (in operation)
- b. "Turmhofschacht" (in operation)
- c. "Abraham-Schacht" (being prepared for operation)
- d. "Julius-Schacht" (being prepared for operation)
- e. "Mueller-Schacht" (being prepared for operation)

7. Workforce

Six thousand men; scheduled to be increased to thirteen thousand. The additional workmen were allegedly to be transferred from the AUE District, where ore findings are said to have decreased.

8. Ore Testing

It was rumored that the ore was tested in DRESDEN.

IV - March 19489. Resumption of Operations *

- a. The shut down "Himmelsfuerst" Mine, with three shafts located in BRAND-ERRISDORF, resumed operation. It had depths of 100, 260 and 400 feet (see annexes 2 and 4).

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b. The "Konstantin" Mine and the "Moritz" gallery, about five hundred feet deep, located in ZUG, resumed operation (see Annex 4).

V - January 194810. LINDA Mine **

- a. A new mine was opened in LINDA (N 51/K 86).
- b. Workforce was about a thousand men.
- c. The workings were primitive. There were no elevators. Ladders descended to a depth of five hundred feet.

VI - 8 March 194811. EPPENDORF-HALSBACH-HALSBRUECKE Area

- a. Prospecting activities were observed in the area of EPPENDORF (N 51/K 85), HALSBACH (N 51/K 97), and HALSBRUECKE (N 51/K 97).
- b. The dumps at the MULDENHUETTEN railroad station, immediately southeast of FREIBERG, were examined with pack-searching instruments for uranium containing ore.

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Comment:

a. The FREIBERG District, with the Freital deposits, is the eastern part of the Saxon uranium ore mining area. The Soviets commenced prospecting and opening activities in this area at the end of 1947. While the work force of "Object 15" was about six thousand in August 1948, the output was insignificant, due to only sporadic occurrences of uranium pitchores. No exact production figures can be given, since no degree of concentration was indicated with these figures.

b. A chart (see Annex 4) [redacted] shows the location of the individual mines in this area as of 1944.

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* c. [redacted] at the end of May 1948 [redacted] prospecting tests were suspended near BRAND-IRBISDORF and the workmen there sent to the "Reiche-Zeche" Mine, in FREIBERG.

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** [redacted] exploratory drilling in LINDA during the same period of observation.

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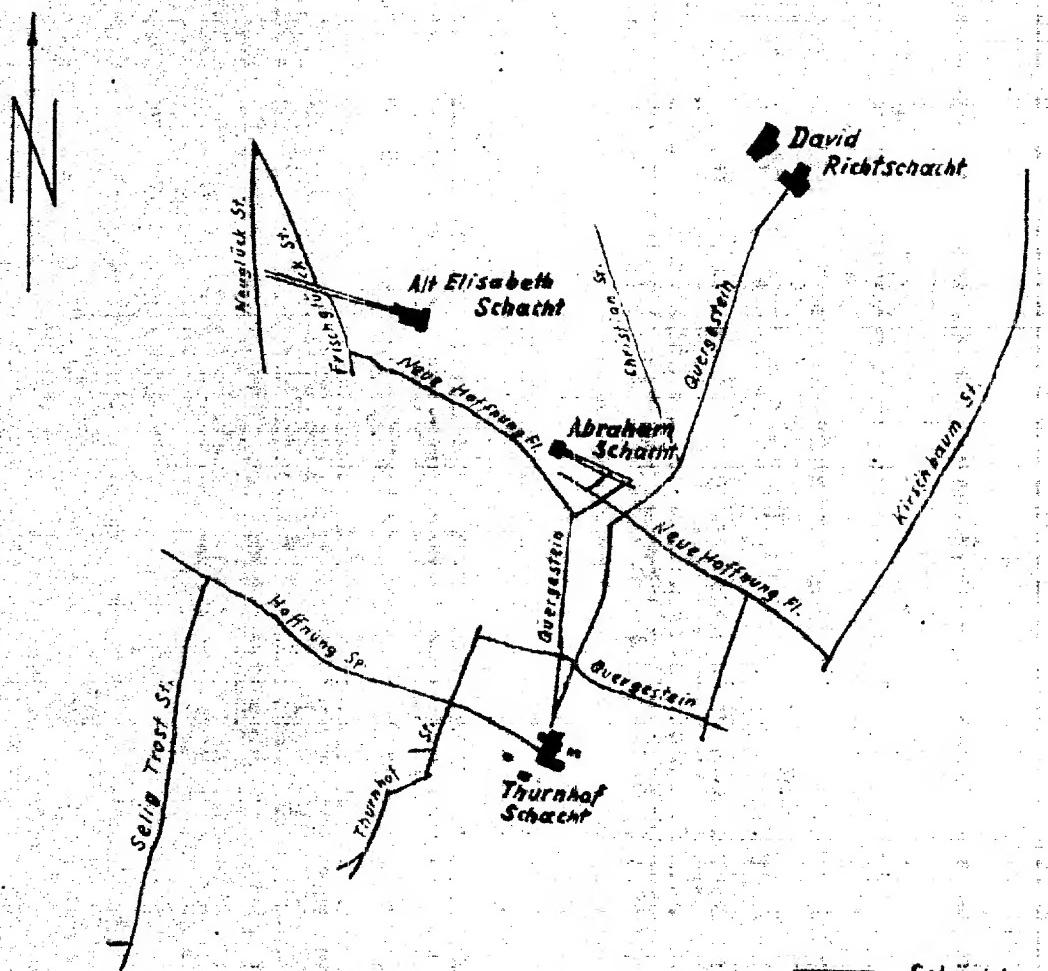
SOMERSET

"Himmelfahrt-Fundgrube" near Flöha

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Mines and Ore-Lodes



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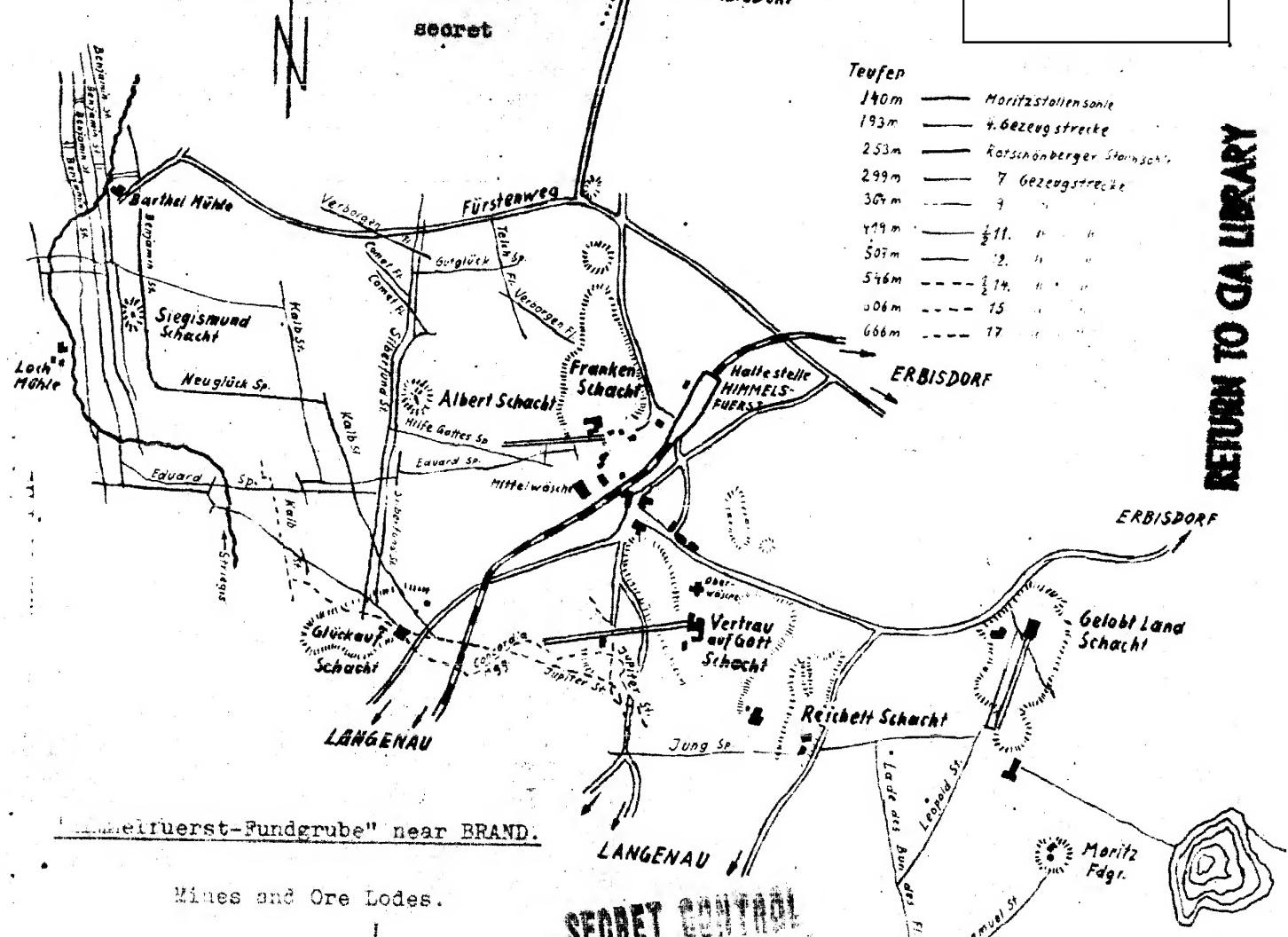
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Annex 2

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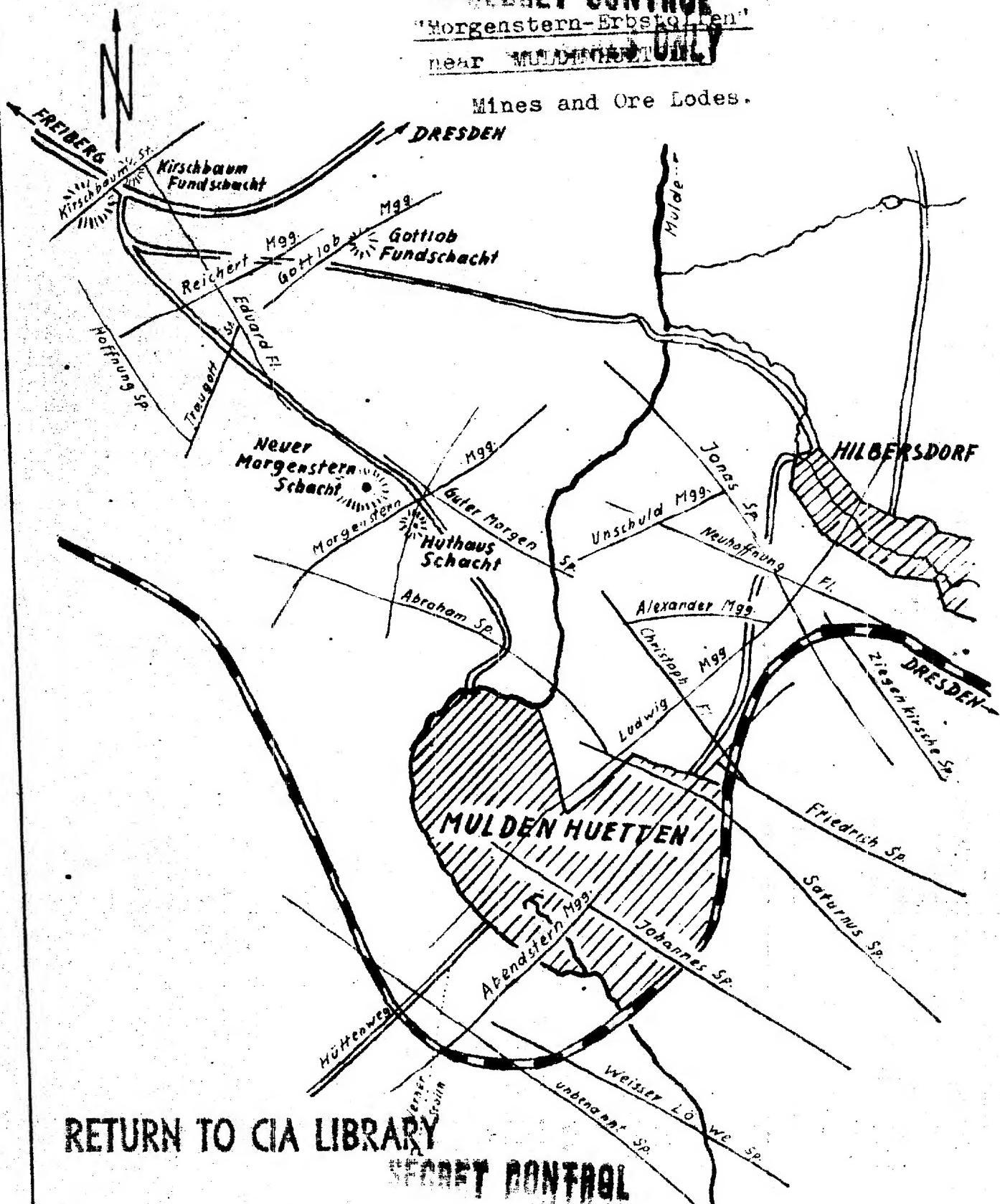
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"Morgenstern-Erbstollen"
near MULDENHUTEN

Mines and Ore Lodes.

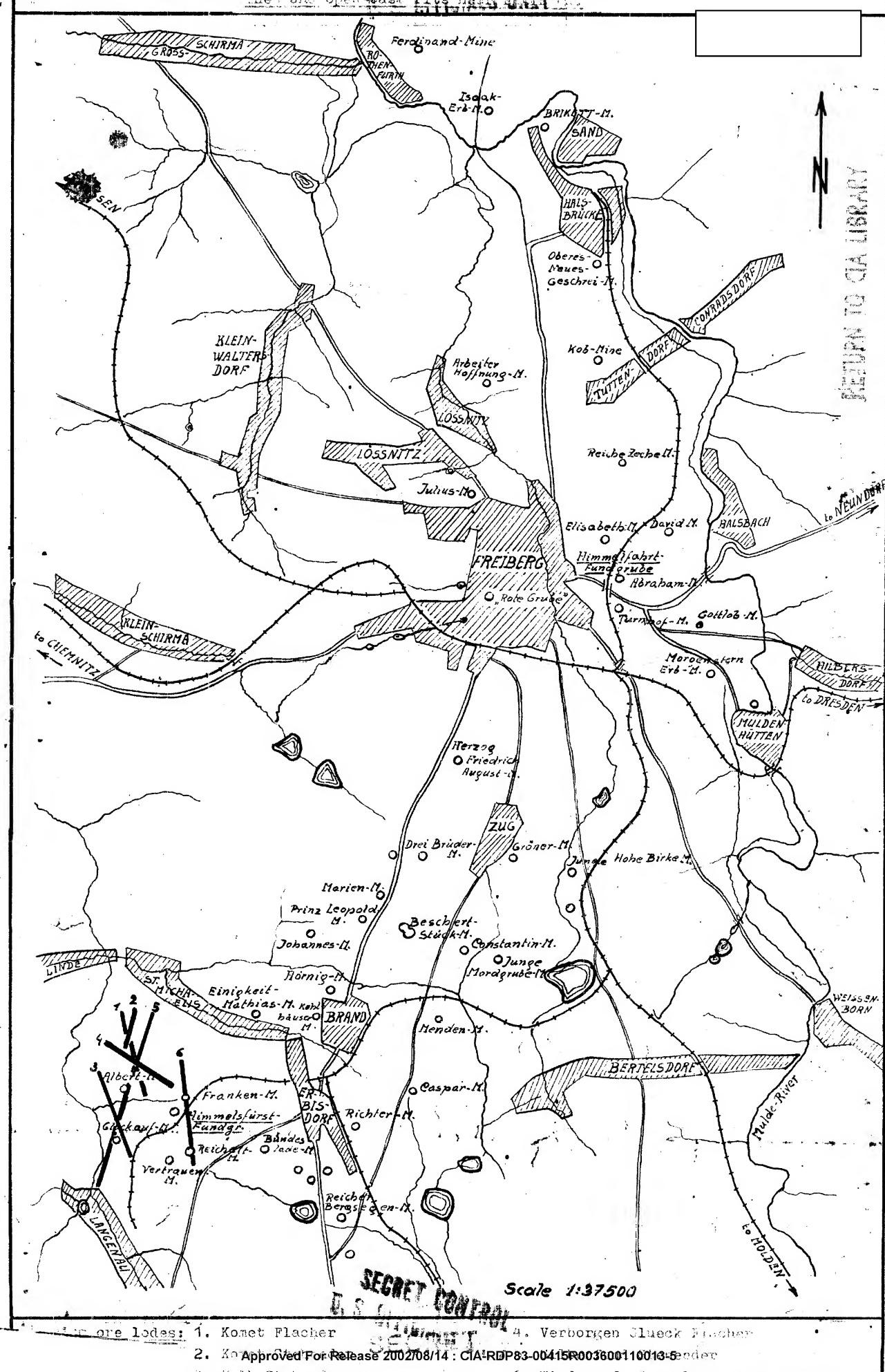


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